

WHAT IS CLAIMED IS:

1. A processing apparatus of sheets, comprising:  
supply section configured to supply the sheets;  
feeding section configured to feed the sheets  
5 supplied by the supply section;  
a vaned wheel which has a plurality of blades, and  
which rotates, thereby allows said sheets to enter  
between said blades, and guides the sheets in a  
predetermined direction;  
10 an accumulation section for accumulate the sheets  
guided by the vaned wheel;  
at least two detection section, disposed at a  
predetermined interval in a feeding direction in a  
middle portion of said feeding section, for detecting  
15 the sheets feed by said feeding section;  
measurement section configured to measure a  
passing time of the sheets feed by said feeding section  
in each detection section based on a detection result  
of each detection section;  
20 calculation section configured to obtain a control  
amount of a rotation phase of said vaned wheel from a  
measurement result of the measurement section; and  
control section configured to control the rotation  
phase of said vaned wheel in accordance with the  
25 control amount obtained by the calculation section.
2. The apparatus according to claim 1, wherein  
said calculation section acquires a tip-end passing

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time with respect to a plurality of sheets from the measurement result of said measurement section, subjects the acquired tip-end passing time of the plurality of sheets to a predetermined calculation, and  
5 obtains the control amount of the rotation phase of said vaned wheel.

3. The apparatus according to claim 1, wherein the control amount obtained before a supply operation of the sheets by said supply section is given as an  
10 initial value of said control amount.

4. The apparatus according to claim 1, wherein said control section has a reference signal as a time reference of the control, obtains a deviation amount from said reference signal when the sheets supplied by  
15 said supply section are feed by said feeding section and reach said vaned wheel, additionally obtains the deviation amount of rotation of said vaned wheel with respect to said reference signal, controls the rotation of said vaned wheel based on a difference of these  
20 obtained deviation amounts, and establishes synchronization between a supply timing of the sheets by said supply section and the rotation phase of said vaned wheel.

5. The apparatus according to claim 1, further  
25 comprising:

a plurality of coaxially disposed vaned wheels for guiding the sheets into said one accumulation section;

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at least two detection section, disposed at a predetermined interval in a direction crossing at right angles to the feeding direction in the middle portion of said feeding section, for detecting a tip end or a rear end of the sheets feed by said feeding section in a state in which synchronization is established between the rotation phase with respect to each vaned wheel and a supply timing of the sheets by said supply section;

measurement section configured to measure an inclination of the sheets feed by said feeding section with respect to the feeding direction based on the detection result of each detection section; and

control section configured to separately control the respective rotation phases of said two vaned wheels based on the measurement result of the measurement section.

6. A processing apparatus of sheets, comprising:  
supply section configured to supply the sheets;  
feeding section configured to feed the sheets supplied by the supply section;

detection section configured to detect a type of the sheets from the sheets feed by the feeding section;

sorting section configured to sort the sheets feed by said feeding section in accordance with a detection result of the detection section;

a vaned wheel which has a plurality of blades arranged at a predetermined interval in a rotation

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direction, and which rotates, thereby allows the sheets sorted by said sorting section to enter between said blades, and guides the sheets in a predetermined direction;

5           an accumulation section for accumulate the sheets guided by the vaned wheel;

          at least two detection section, disposed at a predetermined interval in a middle portion of said feeding section, for detecting the sheets feed by said  
10           feeding section;

          measurement section configured to measure a tip-end passing time of the sheets feed by said feeding section in each detection section based on a detection result of the detection section;

15           calculation section configured to obtain a control amount of a rotation phase of said vaned wheel from a measurement result of the measurement section; and

          control section configured to control the rotation phase of said vaned wheel in accordance with the  
20           control amount obtained by the calculation section.

7. The apparatus according to claim 6, wherein said calculation section acquires a tip-end passing time with respect to a plurality of sheets from the measurement result of said measurement section,  
25           subjects the acquired tip-end passing time of the plurality of sheets to a predetermined calculation, and obtains the control amount of the rotation phase of

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said vaned wheel.

8. The apparatus according to claim 6, wherein the control amount obtained before a supply operation of the sheets by said supply section is given as an  
5 initial value of said control amount.

9. The apparatus according to claim 6, wherein said control section has a reference signal as a time reference of the control, obtains a deviation amount from said reference signal when the sheets supplied by  
10 said supply section are feed by said feeding section and reach said vaned wheel, additionally obtains the deviation amount of rotation of said vaned wheel with respect to said reference signal, controls the rotation of said vaned wheel based on a difference of these  
15 obtained deviation amounts, and establishes synchronization between a supply timing of the sheets by said supply section and the rotation phase of said vaned wheel.

10. The apparatus according to claim 6, further  
20 comprising:

a plurality of coaxially disposed vaned wheels for guiding the sheets into said one accumulation section;  
at least two detection section, disposed at a predetermined interval in a direction crossing at right  
25 angles to the feeding direction in the middle portion of said feeding section, for detecting a tip end or a rear end of the sheets feed by said feeding section in

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a state in which synchronization is established between the rotation phase with respect to each vaned wheel and a supply timing of the sheets by said supply section;

5 measurement section configured to measure an inclination of the sheets feed by said feeding section with respect to the feeding direction based on the detection result of each detection section; and

10 control section configured to separately control the respective rotation phases of said two vaned wheels based on the measurement result of the measurement section.

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